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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,484

09/29/2006

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,484	COUNIHAN ET AL.	
	Examiner	Art Unit	
	Anh T.N. Vo	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement is made of the receipt of Preliminary Amendment filed 27 July 2006.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16, 18-24 and 26-27 are rejected under 35 USC 102 (b) as being anticipated by Altendorf (US Pat. 5,659,345).

Altendorf discloses in Figures 4-6 and 11 an ink-jet pen comprising:

1. a serial arrangement of three chambers (160, 162, 164), each chamber defining a member receiving volume to receive a negative pressure producing member (130, 132, 134) to hold ink, the container defining an ink supply port (168, 170, 172) for each chamber through which ink can be drawn from the chamber, the ink supply port (170) of one (162) of the chambers (160, 162, 164) being displaced from alignment with the member receiving volume of that chamber (Figure 6).
2. wherein each member receiving volume is of the same width (W3, W5, W7) (Figure 6).
3. wherein each member receiving volume is of the same depth (Figure 6)
4. wherein each member receiving volume is of the same height (Figure 4).
5. wherein each member receiving volume is rectangular viewed in the direction of insertion of a negative pressure producing member (130, 132, 134) into the volume (Figure 6).
6. wherein each member receiving volume has an opening for insertion of a negative pressure producing member, the opening being covered by a lid (Figure 4).
7. wherein the openings are side by side in a straight line (Figure 4).
8. wherein the ink supply port (170) of the first chamber (162) in the serial arrangement is displaced from alignment with the member receiving volume of the first chamber (Figure 6).
9. wherein the ink supply port (172) of one chamber (164) is displaced to be aligned with the member receiving volume of another (164) of the three chambers (160, 162, 164) (Figure 6).
10. wherein the ink supply port of the first chamber is displaced to be aligned with the member receiving volume of the second chamber in the serial arrangement (Figure 6).
11. wherein the outlets (183, 184, 185) from the chambers (160, 162, 164) are underneath the ink container (24) (Figure 6).

12. wherein the ink outlets (183, 184, 185) are at the same height (Figure 6).
13. wherein the member receiving volume of each chamber includes a negative pressure producing member (130, 132, 134) (Figure 6).
14. wherein the negative pressure producing members (130, 132, 134) are identical (Figure 4).
15. wherein the container (24) has a manifold (166) associated with the displaced output port chamber, the manifold having an inlet aligned with the member receiving volume of the chamber and an outlet displaced from alignment with the member receiving volume of the chamber (Figure 6).
16. wherein the manifold (166) is a separate part to be attached to the main part of the container (Figure 6).
18. wherein the ink container (24) defines an ink fill hole (unmarked fill holes that contain elements 146, 150, 152) for each chamber (160, 162, 164), the ink fill holes being provided in a common surface of the ink container and being in a serial arrangement, and being arranged on a notional straight line (Figure 11).
19. wherein the said notional straight line is parallel to the plane of one surface of the container (Figure 11).
20. wherein the said notional straight line is parallel to the plane of the major surface of the container (Figure 11).
21. wherein the ink container (24) defines a breather hole (148, 154, 156) for each chamber (160, 162, 164), the breather holes being provided in a common surface of the ink container and being in a serial arrangement, being arranged on a notional straight line (Figures 4 and 11).
22. wherein the breather holes (148, 154, 156) are arranged on a notional straight line which is parallel to the plane of one surface of the container (24) Figures 4 and 11).
23. wherein the breather holes (148, 154, 156) are arranged on a notional straight line which is parallel to the plane of the major surface of the container (24) Figures 4 and 11).

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24. wherein the container (24) further includes an element (110) including a plurality of projections (146, 150, 152), each projection being received in a breather hole (148, 154, 156) of the container (Figure 4).

26. wherein each member receiving volume is of the same width and depth (Figures 4 and 6).

27. wherein each member receiving volume is of the same width and depth and height (Figures 4 and 6).

Claims 1-16 and 18-29 are rejected under 35 USC 102 (b) as being anticipated by Shinada et al. (US Pat. 6,019,465).

Shinada et al. disclose in Figures 1-2 and 15a-15b an ink-jet recording apparatus comprising:

1. a serial arrangement of three chambers (7), each chamber defining a member receiving volume to receive a negative pressure producing member (23) to hold ink, the container defining an ink supply port (28 or 151, 152, 153, 154, 155) for each chamber through which ink can be drawn from the chamber, the ink supply port of one of the chambers (7) being displaced from alignment with the member receiving volume of that chamber (Figures 2 and 15a-15b).

2. wherein each member receiving volume is of the same width (Figures 15a-15b).

3. wherein each member receiving volume is of the same depth (Figures 15a-15b).

4. wherein each member receiving volume is of the same height (Figures 15a-15b).

5. wherein each member receiving volume is rectangular viewed in the direction of insertion of a negative pressure producing member (23) into the volume (24) (Figure 2).

6. wherein each member receiving volume has an opening for insertion of a negative pressure producing member, the opening being covered by a lid (Figure 2).

7. wherein the openings are side by side in a straight line (Figure 15a-15b).
8. wherein the ink supply port (28 or 151, 152, 153, 154, 155) of the first chamber in the serial arrangement is displaced from alignment with the member receiving volume of the first chamber (Figures 2 and 15a-15b).
9. wherein the ink supply port (28) of one chamber (7) is displaced to be aligned with the member receiving volume (24) of another of the three chambers (7) (Figures 2 and 15a-15b).
10. wherein the ink supply port of the first chamber is displaced to be aligned with the member receiving volume of the second chamber in the serial arrangement (Figures 2 and 15a-15b).
11. wherein the outlets (28 or 151, 152, 153, 154, 155) from the chambers (24 or 7) are underneath the ink container (20) (Figures 2 and 15a-15b).
12. wherein the ink outlets are at the same height (Figure 15a).
13. wherein the member receiving volume (24) of each chamber (7) includes a negative pressure producing member (23) (Figure 2).
14. wherein the negative pressure producing members (23) are identical (Figures 2 and 15a).
15. wherein the container (7) has a manifold (122) associated with the displaced output port chamber, the manifold having an inlet aligned with the member receiving volume of the chamber and an outlet displaced from alignment with the member receiving volume of the chamber (Figures 15a-15b).
16. wherein the manifold (122) is a separate part to be attached to the main part of the container (7) (Figures 15a-15b).
18. wherein the ink container (7) defines an ink fill hole for each chamber, the ink fill holes being provided in a common surface of the ink container and being in a serial arrangement, and being arranged on a notional straight line (Figure 2).

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19. wherein the said notional straight line is parallel to the plane of one surface of the container (7) (Figure 2).

20. wherein the said notional straight line is parallel to the plane of the major surface of the container (Figure 2).

21. wherein the ink container (7) defines a breather hole for each chamber, the breather holes being provided in a common surface of the ink container and being in a serial arrangement, being arranged on a notional straight line (Figures 2 and 15a).

22. wherein the breather holes are arranged on a notional straight line which is parallel to the plane of one surface of the container (7) (Figures 2 and 15a).

23. wherein the breather holes are arranged on a notional straight line which is parallel to the plane of the major surface of the container (7) (Figures 2 and 15a).

24. wherein the container (7) further includes an element including a plurality of projections, each projection being received in a breather hole of the container (Figures 2 and 15a).

25. wherein the element prevents the container from being fully engaged in a printer and at least part of the element is arranged to be removed to enable the container to be fully engaged in a printer (Figures 1-2 and 12a-12b).

26. wherein each member receiving volume is of the same width and depth (Figures 15a-15b).

27. wherein each member receiving volume is of the same width and depth and height (Figures 15a-15b).

28. a serial arrangement of three chambers (7), each chamber defining a member receiving volume to receive a negative pressure producing member (23) to hold ink, the container defining an ink supply port (28 or 151, 152, 153, 154, 155) for each chamber through which ink can be drawn from the chamber by means (122) of an ink tapping pipe (131, 132, 133, 134, 135) of the printer to be received in the ink supply port to convey ink to the print head (130) of the printer,

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the ink supply port of one of the chambers being displaced from alignment with the member receiving volume of that chamber (Figures 1-2, 12a-12b and 15a-15b).

29. a serial arrangement of three chambers (7), each chamber defining a member receiving volume (24) to receive a negative pressure producing member (23) to hold ink, the container defining an ink supply port (28 or 151, 152, 153, 154, 155) for each chamber through which ink can be drawn from the chamber, the ink supply port of one of the chambers being displaced from alignment with the member receiving volume of that chamber, wherein the container has a manifold (122) associated with the displaced ink supply port chamber, the manifold (122) having an inlet (131, 132, 133, 134, 135) aligned with and communicating with the member receiving volume of the chamber and the manifold having an outlet displaced from alignment with the member receiving volume of the chamber, the outlet forming the displaced ink supply port (Figures 1-2, 12a-12b and 15a-15b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 USC 103 (a) as being unpatentable over Altendorf (US Pat. 5,659,345).

Altendorf discloses the basic features of the claimed invention as stated above but does not disclose the manifold that contains a negative pressure producing member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange

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“the manifold contains a negative pressure producing member” for the purpose of keeping a constant negative pressure in an ink cartridge.

Claim 17 is rejected under 35 USC 103 (a) as being unpatentable over Shinada et al. (US Pat. 6,019,465).

Shinada et al. disclose the basic features of the claimed invention as stated above but does not disclose the manifold that contains a negative pressure producing member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange “the manifold contains a negative pressure producing member” for the purpose of keeping a constant negative pressure in an ink cartridge

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 4,771,295; US Pat. 6,547,379) cited in the PTO 892 form show an ink cartridge which is deemed to be relevant to the present invention. These references should be reviewed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Monday to Friday from 9:00 A.M.to 5:30 P.M. The fax number of this Group 2861 is (571) 273-8300.

/Anh T.N. Vo/

Primary Examiner, Art Unit 2861

February 1, 2009

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